

Visqueen CO₂ Gas Membrane

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- Low permeability to carbon dioxide and radon.
- High quality robust Co-Polymer Thermoplastic Membrane.
- High resistance to puncture.
- Complies with relevant codes of practice such as BRE and CIRIA.
- Also acts as a damp proof membrane.



QUALITY ASSURANCE
 Visqueens products are manufactured under a Quality Management System approved to ISO 9001:2000 by SGS



ENVIRONMENTALLY ACCREDITED
 Visqueens Building Products reduce their impact upon the environment by operating within the criteria of an SGS registered ISO 14001 Environmental Management System



HEALTH & SAFETY MANAGEMENT
 Visqueens Building Firms reduce their impact to human health by operating within the criteria of an SGS registered BS OHSAS Occupational Health and Safety Management System

Description

The Building Regulations require that proper precautions be taken to prevent danger to health and safety when building on contaminated land. Visqueen CO₂ Gas Membrane offers a safe solution for the protection of buildings against carbon dioxide, when installed in accordance with the relevant codes of practice such as BRE, CIRIA and the Chartered Institute of Environmental Health Ground Gas Handbook. Visqueen CO₂ Gas Membrane is a robust copolymer thermoplastic membrane; for ease of identification on site the membrane is coloured yellow. The barrier is flexible and is easy to install, and is also suitable for use as a damp proof membrane.

Application

Visqueen CO₂ Gas Membrane offers a safe solution for the protection of buildings and occupiers against carbon dioxide and radon ingress. Typically these are sites previously used as coalfields, landfill or are contaminated industrial sites.

Visqueen CO₂ Gas Membrane

Installation

Visqueen CO₂ Gas Membrane and ancillary components must be installed in accordance with the recommendations of Building Research Establishment BRE 414 "Protective measures for housing on gas contaminated land" and CIRIA C665 "Assessing risks posed by hazardous ground gases to buildings", NHB C guidelines and the Chartered Institute of Environmental Health Ground Gas Handbook. The product is not intended for use where there is the risk of hydrostatic pressure.

The membrane should be installed on a compacted sand blinding layer or smooth concrete float finish allowing adequate overlap for jointing between the sheets and avoiding bridging (i.e. areas of unsupported membrane). In areas where high levels of unsupported membrane occur it is recommended that Visqueen Pre Applied Membrane is used. To avoid slip or shear planes and high compressive loadings it is not recommended to take the membrane through the wall. In order to provide a continuous barrier across the cavity Visqueen Zedex CPT DPC should be taken through the blockwork and incorporated below the damp proof course cavity tray in the outer leaf.

If the membrane is punctured or perforated then a patch of material with identical thickness should be lapped at least 150mm beyond the limits of the puncture and bonded with Visqueen Double Sided Jointing Tape and sealed with Visqueen Foil Backed Jointing Tape. Alternatively a patch can be formed using Visqueen Detailing Strip and lapped at least 150mm beyond the limits of the puncture. External and internal corners should be round and reinforced with Visqueen Detailing Strip. Where this is not possible and the three dimensional shapes are complex it is recommended a preformed unit is used.

Laps can be joined together by either using the Visqueen Gas Barrier jointing system or welded by our specialist onsite contractors.

Jointing and Sealing

Visqueen CO₂ Gas Membrane should be overlapped by at least 150mm and bonded with Visqueen Double Sided Tape. The joint is secured with Visqueen Foil Backed Girth Jointing Tape. Ensure that the membrane is clean and dry at the time of jointing. Airtight seals should be formed around all service entry points. Visqueen Pre-formed Top Hat Units must be used for sealing service entry pipes. The base of the top hat should be sealed using Visqueen Double Sided Tape and Visqueen Foil Backed Girth Jointing Tape is used to secure the joint.

NB. In demanding site conditions use Visqueen GR Lap Tape as a high performance alternative to Visqueen Foil Jointing Tape.

Ventilation

When medium to high levels of CO₂ gases are present or when the generation of CO₂ gases still occurs, then an open void beneath the ground floor should be constructed as ventilation beneath the ground floor will dilute and disperse the gases to atmosphere. Open voids are normally restricted to beam and block floors or other precast concrete floor systems. An alternative for providing ventilation to *in situ* concrete floor slabs is to install a Visqueen Ventilation System.

Covering

Visqueen CO₂ Gas Membrane should be covered by a protective layer as soon as possible after installation. Care should be taken to ensure that the membrane is not punctured, stretched or displaced when applying a screed or final floor covering. A minimum thickness of 50mm screed is recommended. When reinforced concrete is to be laid over the barrier the wire reinforcements and spacers must be prevented from contacting the barrier. It is recommended that the barrier is covered with Visqueen Protection Boards or screed before positioning the reinforcement. When underfloor heating is being installed, it is recommended that the barrier is positioned between the blinded hardcore and insulation. This will protect the insulation from

SPECIFICATION SUPPORT

The following items are available to view online or to download from www.visqueenbuilding.co.uk

- . Technical Datasheets
- . Typical installation CAD details
- . Health and Safety data

Register online for access to NBS Clauses and for information about our CPD Seminars



TECHNICAL SUPPORT

For advice on detailing or installation call Visqueen Building Products Technical Help Line 0845 302 4758. Pricing & Availability may be obtained from our UK Network of merchant stockists. For details of these call our Sales Office on 0845 302 4758.



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Visqueen CO2 Gas Membrane

moisture and avoid any risk of overheating the membrane.

Storage and Handling

Visqueen CO₂ Gas Barrier is classified as non-hazardous when used in accordance with the relevant Code of Practice (CP 102:1973). The product is chemically inert and is not affected by acids and alkalis that may be present in the subsoils. The material is not recommended for uses where it will be exposed to long periods of outdoor weathering as exposure to ultraviolet light will embrittle the product. Weathering will not occur when the membrane is installed in accordance with CP 102:1973. Care should be taken to avoid accidental damage when handling the membrane on site. When the weather is cold all jointing tapes should be kept in a warm and dry place until needed. Installation is not recommended below 5°C.

TYPICAL PROPERTIES

Technical data

Nominal Thickness (µm)	500
Nominal Weight (g/m ²)	465
Roll Length (m)	12.5
Roll Width (m)	4
Carbon Dioxide Gas Permeability ISO 2782	2.80 x 10 ⁻¹⁷ m ² /sec/Pa

The information given in this datasheet is based on data and knowledge correct at the time of printing. Statements made are of a general nature and are not intended to apply to any use or application outside any referred to in the datasheet. As conditions of usage and installation are beyond our control we do not warrant performance obtained but strongly recommend that our installation guidelines and the relevant British Standard Codes of Practice are adhered to. Please contact us if you are in any doubt as to the suitability of application.

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